What is claimed is:

1. A thin flange for use with a vacuum system comprising;

a member having a first face having a sealing surface and an opposed, substantially parallel second face having a sealing surface, wherein the first face sealing surface and the second face sealing surface comprise a knife edge.

2. The thin flange according to claim 1 further comprising a plurality of through holes configured to be alignable with a plurality of bolt holes disposed in a standard thickness flange.

3. The thin flange according to claim 1 comprising at least one mounting feature disposed within a perimeter defined by at least a first sealing surface.

4. The thin flange according to claim 3 wherein the at least one mounting feature comprises at least one groove formed in an inner surface.

5. The thin flange according to claim 3 wherein the at least one mounting feature comprises at least one threaded bore.

6. The thin flange according to claim 1 comprising at least one feed-through.

7. A vacuum component mounting system comprising:

a first flange having a sealing surface and a second flange having a sealing surface,

a thin flange disposed between the first flange and the second flange, the thin flange comprising a first sealing surface and a second sealing surface being configured to interact with the first flange sealing surface and the second flange sealing surface respectively and thereby form a vacuum tight seal.

8. The vacuum component mounting system according to claim 7 wherein the thin

flange is retained between the first flange and the second flange by a clamping force urging the first flange toward the second flange.

9. The vacuum component mounting system according to claim 7 wherein the thin flange contains at least one mounting feature.

10. The vacuum component mounting system according to claim 9 wherein the at least one mounting feature comprises at least one threaded bore.

11. The vacuum component mounting system according to claim 9 wherein the at least one mounting feature comprises at least one groove formed on an inner surface of the thin flange.

12. The vacuum component mounting system according to claim 7 wherein the thin flange comprises at least one feed-through.

13. The vacuum component mounting system according to claim 7 wherein the thin flange comprises a plurality of through holes configured to be alignable with a plurality of bolt holes disposed in the first flange and in the second flange.